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ROYAL ONTARIO MUSEUM OF ZOOLOGY

TORONTO

WILDLIFE STUDIES

2. The Smelt in the Great Lakes

A new fish has appeared in recent years in lake Huron and other Great Lakes. This is the smelt which runs to spawn into many streams shortly after the ice goes out. In some streams, particularly those flowing into lake Huron smelts run in such numbers that large quantities are caught each spring by people living in the vicinity.

The smelt is not native to the Great Lakes but first appeared a few years ago. Its native home is the Atlantic coast where it lives in the sea, running into streams in spring to spawn. Some lakes in Maine and New Brunswick contain them all the year round and it was from such fresh water lakes that they were introduced into the Great Lakes.

The smelt first gained access to the upper Great Lakes through plantings by the state of Michigan. As early as 1906 smelts were planted in the St. Mary's river from the Sault Ste. Marie (Michigan) hatchery. Plantings were made at the same place at intervals up to 1921 but it is doubtful if any of these plantings were successful. In 1912 several million smelt eggs were planted in Crystal lake, Michigan but mature smelts were not noticed in this lake until 1922. The next year they appeared in lake Michigan near the outlet of Crystal lake. The first records for lake Huron came in 1932 when many were taken in herring nets at the south end of the lake. Specimens were taken at Tobermory the same year. The first smelts were taken in lake Erie about 1935; they have been recorded also in lake Superior and lake Ontario but they are not yet as common in any of these lakes as in lake Huron. About five years after the smelt is first recorded in a locality, spawning runs are noticed in nearby streams or it is reported as abundant.

Smelts were introduced into Michigan to serve as food for land-locked salmon which it was expected would thrive in lakes once smelts had becom established.

A biological study of the smelt in Green Bay, Lake Michigan indicated that they feed on much the same food as lake herrings and whitefish although they also eat small fish. Smelt are eaten in large numbers by lake trout and to a lesser extent by perch and ling. Smelt are said to make excellent bait for lake trout. In Green Bay the smelt spawn at the end of their second year of life when they are $6\frac{1}{2}$ to $8\frac{1}{2}$ inches in length.

In Green Bay the smelt are reported to be a serious problem to the commercial fishermen since they get tangled in their gill nets to such an extent that the net will catch only a few, if any, of the more desirable species.

Only time will tell whether the appearance of smelts in such numbers in the Great Lakes is beneficial or otherwise; in any case, it is too late to do anything about it now. The time to consider such problems is before introducing a foreign species.